

Fact Sheet	PRESERVING AND PINNING INSECTS

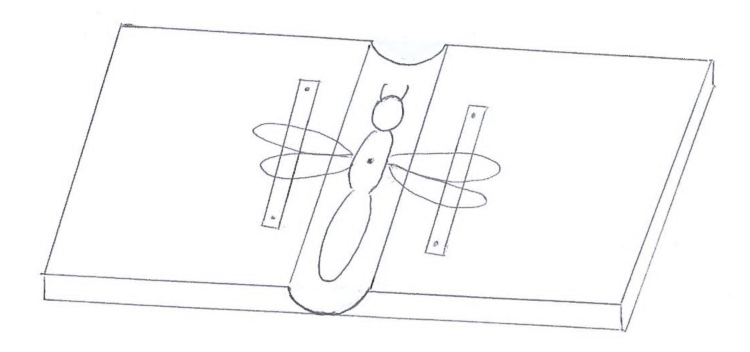
Hard-bodied Insects

To kill insects, place them in a glass jar, add a piece of cotton wool soaked in finger-nail polish remover (ethyl acetate based, not acetone), and place the lid on. Small insects will be killed quickly, but larger specimens require up to an hour. Insects must be set before they harden (within 24 hours). If you wish to pin them later then they can be placed in a freezer. Placing live insects in the freezer for at least 12 hours is another way of killing them by gradually lowering their body temperature.

Special entomological pins that are 38mm long are passed through the insect's thorax so that a quarter of the pin is above the specimen. Pins should be inserted into the insect so that it is at right angles to the transverse and longitudinal axes of the insect's body.

These pins do not become corroded by insect body fluids. They can be purchased in assorted sizes (although size 3 is the most commonly used) from Australian Entomological Supplies (http://www.entosupplies.com.au/).

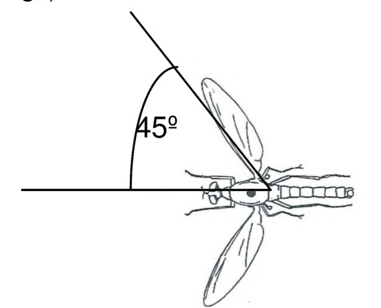
Most insects are pinned through the centre of the thorax and are set with wings extended. So that the wings can be positioned, the body of the insect is lowered into a groove in a polystyrene board. Grooves of any width can be cut in this setting board with a bread knife. (See diagram). Exercise care when using knives.



The pin is pushed into the setting board until the bases of the wings are level with the top of the board. Strips of tracing paper are pinned at the top edge of the board and placed over the wings. The wings are moved into position; the paper strip is pulled tight and pinned around the edges of the wings, not through them. The strips of paper and pins hold the wings in the positions described below until the body hardens (3 weeks). Set insects are stored in closed boxes with naphthalene (mothballs) to prevent pests destroying the specimens.

Some common insects and methods of pinning are outlined below.

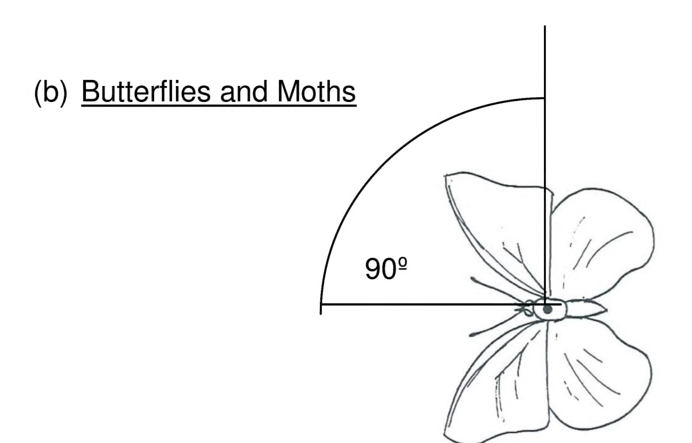
(a) True Flies (with only one pair of wings)



Pin through the centre of the thorax between the forewings, a little to the right of the centre. The front edges of the wings are placed at 45° to the body.



(b) Butterflies and Moths



Pin through the centre of the thorax with wings displayed at both sides of the body; overlap of fore and hind wings at 90° to the body.

The back edge of the forewing should be at right angles to the body. The front edge of the hindwing is tucked under the forewing, leaving a small V. The abdomen is supported with a 'V' of pins.

(c) Dragonflies and Damselflies, Bees and Wasps.

As for (b) but with the hind wings at 90° to the body.

For dragonflies and damselflies, the front edges of the hindwings should be at right angles to the body. The forewings are set so that they are just a little in front of the hindwings. For the bees and wasps, the fore and hindwings should be coupled together and the front edges of the hind wings set at right angles to the body.

Dragonflies are pinned through the centre of the thorax, while wasps and bees are pinned through the thorax, to the right of the centre.

(d) Grasshoppers, Crickets, Cockroaches, Preying Mantids, Stick and Leaf Insects

As for (c), but spread the left wing only, leaving the right pair over the body. The front edge of the hindwing should be at right angles to the body. The forewings are set so that they are just a little in front of the hindwings. The large hind legs of the grasshopper are set in a jumping position, using pins to hold the legs in place.

The pin is inserted through the base of the right wing.

(e) Beetles

Leave both pairs of wings covering the abdomen and pass the pin through the right wing, instead of the centre of the thorax.

The pin is inserted into the upper body surface through the front half of the right wing cover, so that the pin emerges between the bases of the second and third legs.

(f) Bugs

Leave both pairs of wings over the abdomen. Pass the pin through the centre of the scutellum (the triangular area behind the thorax.)

Displaying Small Insects

Pointing

The insect is glued to the tip of a triangle of white card which is mounted on a pin. Use a very small amount of water-soluble glue to attach the insect to the 'point' of the card.

Carding

A small insect is glued onto a rectangular piece of card measuring either 5x14mm or 9x20mm. The card helps to protect the insect.

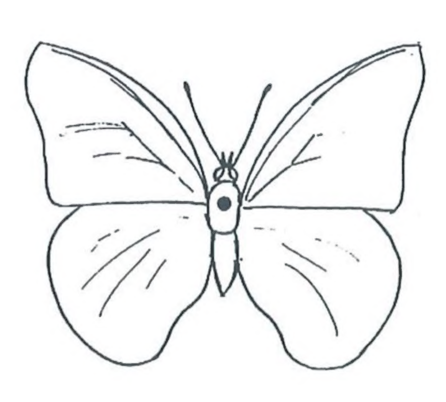
Labelling

Mounted on the same pin as the insect, the label is made of stiff white card and should be as small as possible. The label should include information about the:

- Locality
- Date of collection
- Collector's name

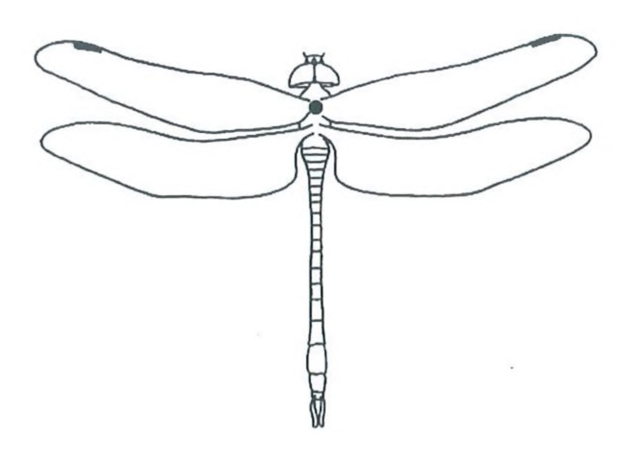
A second card can have information on the identification of the specimen.

WING ARRANGEMENT FOR PINNED INSECTS



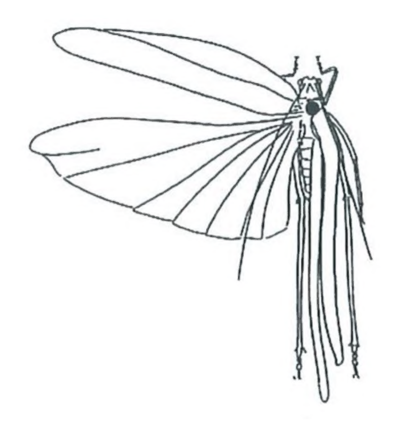
BUTTERFLIES & MOTHS

Hind margin of the front wing at right angles to the body. Rear wing arranged so only a small notch between front and rear wings.



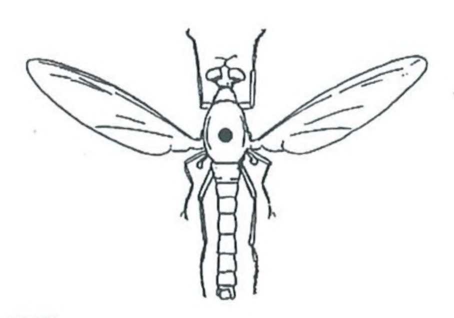
DRAGONFLIES, WASPS, LACEWINGS

Front margin of the rear wings at right angles to the body. Front wings pushed forward to clear edge of rear wing. In wasps front and rear wings may remain hooked together



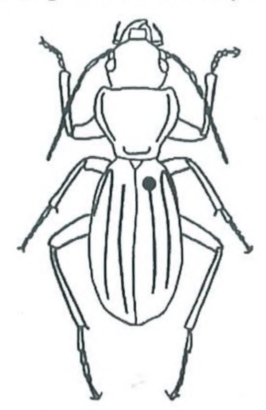
GRASSHOPPERS, COCKROACHES, STICK INSECTS, MANTIDS

Set only the wings on left side. Front margin of rear wing at right angles to the body. Front wing pushed forward to clear edge of rear wing.



FLIES

Set the wings slightly forward of right angles to the body.



BEETLES AND BUGS

Do not spread the wings. Pin through the front half of right wing so pin emerges between mid - and hind legs.